

AMENDMENT TO CLAIMS

Please amend the claims as follows:

1. (withdrawn)
2. (withdrawn)
3. (withdrawn)
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27. (withdrawn)
28. (withdrawn)
29. (withdrawn)
30. (withdrawn)
31. (withdrawn)
32. (currently amended) A machine for grooving a base for a polishing pad, said polishing pad made of a resin material, said machine comprising:

a bed;

a platen including a hollow shaft member supported by said bed via a bearing so that said hollow shaft member is rotatably about a C-axis which is perpendicular to said bed;

a suction plate fixed to one of opposite axial end portions of said hollow shaft member remote from said bed and formed with a plurality of through holes arranged evenly over an entire area thereof for attracting the base for the polishing pad to ~~be placed on~~ said suction plate;

drive mechanism for rotating said platen about said C-axis and for positioning said platen at a suitable angular position;

a gate-shaped column of a shape having two legs which are opposed to each other with a spacing therebetween and a cross rail extending between and being perpendicular to said two legs, said gate-shaped column being movable in a direction of an X-axis with said cross rail extending across said platen;

at least one saddle mounted on said cross rail so as to be movable in a direction of a Y-axis extending along said cross rail;

a tool rest mounted on said saddle so as to be independently reciprocally movable in a direction of a Z-axis, said tool rest adapted to detachably hold a fixed tool comprising a turning tool comprising a cutting part, said cutting part arranged to have a tooth width within a range of 0.005-1.0mm, a wedge angle within a range of 15-35 degrees, and a front clearance angle within a range of 65-45 degrees;

drive motors for moving and positioning said platen, said column and said saddle and tool rest; and

a numerical control apparatus totally for controlling an operation of said drive motor, wherein said hollow shaft member of said platen is connectable to an air suction device so as to attract said base for said polishing pad on said suction plate by a suction force applied from said air suction device to said base for said polishing pad, and

wherein said machine being operable to cut by said turning tool a multiplicity of generally concentric annular grooves into a surface of said base for said polishing pad with said base for said polishing pad being attracted on said suction plate.

33. (currently amended) A machine according to claim 32, further comprising:

an ion-blowing device for neutralizing said static electricity charged in said polishing pad and chips cut polishing pad fragments, and for separating said chips cut polishing pad fragments from said fixed tool and said polishing pad,

wherein said ion blowing device includes an ion generating device for generating ion, an ion extruding nozzle for extruding said ion toward said cutting part of said fixed tool, an air blowing device for blowing air together with said ion.

34. (original) A machine according to claim 32, wherein said tool rest detachably supports a rotative tool selected from a group consisting of a milling cutter unit and a drill unit.

35. (currently amended) A machine according to claim ~~32~~ 34, wherein said milling cutter unit including at least one milling cutter fixedly supported by a tool shaft extending along a center axis thereof, said at least one milling cutter including a disk-shaped body member with a center hole formed therethrough and a plurality of cutting edges disposed at an outer peripheral portion of said body member at regular angular intervals, and each having a wedge angle within a range

of 20-40 45 degrees, and a front clearance rake angle within a range of 30-45 40 degrees, a tooth width within a range of 0.3-2.0 mm, and a side cutting edge angle of 0-2 degrees.

36. (currently amended) A machine according to claim 35, wherein said machine comprises a plurality of said milling cutters which are fixedly disposed onto said tool shaft such that said tool shaft extends through center axes holes of said plurality of said milling cutters and said plurality of milling cutters are spaced apart from each other in an axial direction of said tool shaft at a uniform pitch of 0.1 mm or more.

37. (currently amended) A machine according to claim 34, wherein said drill unit comprises a single-spindle type or a multiple-spindle type drill unit, said drill unit including a drill having a drill diameter of 0.5-1.5mm, a drill length of 20-30mm, and two cutting edges of helix angle of 1-10 degrees,

said drill being a straight drill having no back-tapered portion at cutting edges thereof and having a shape edge that has a conical angle with no chisel portion of 55-65 degrees.

38. (original) A machine according to claim 32, further comprises a sequential control device adapted to control operation of said drive motor in place of said numerical control apparatus.

39. (currently amended) A machine according to claim 32, wherein said machine includes two of said saddles, wherein at least one of said tool holders of said two saddles is adapted to detachably

support said fixed tool comprising said turning tool comprising a cutting part arranged to have a tooth width within a range of 0.005 - 1.0mm, a wedge angle within a range of 15-35 degrees, and a front clearance angle within a range of 65-45 degrees, and an other one of said tool holders of said two saddles is adapted to detachably support said a rotative tool selected from a group consisting of said a milling cutter unit and said a drilling unit.

40. (currently amended) A machine according to claim 32, wherein said machine includes only one said saddle, said tool holder being adapted to interchangeably support said fixed tool comprising the turning tool comprising a cutting part arranged to have a tooth width within a range of 0.005-1.0mm, a wedge angle within a range of 15-35 degrees, and a front clearance angle within a range of 65-45 degrees, or said a rotative tool selected from a group consisting of said a milling cutter unit and said a drilling unit.